

ITCENTER21: COMPUTER APPLICATIONS

STANDARDS-BASED CURRICULUM

In today's digital world, knowing how to use technology to gather, evaluate, and process information is an essential part of personal and professional success. But how should we teach students the skills and competencies to successfully manage information and technology in all areas of life? AES offers educators a unique and much needed solution to this problem: **ITcenter21: Computer Applications**.

ITcenter21: Computer Applications is a 180-hour course based on standards developed by the International Society for Technology in Education (ISTE), as well as Microsoft® Office Specialist (MOS) standards, and the Internet and Computing Core Certification (IC³) standards.

The course starts with a review of key topics in information technology (IT), research on the internet, and the personal and societal responsibilities associated with the ethical use of IT.

At the heart of the curriculum is a series of **skills units** and **project units**. The skills units each provide ten hours of guided instruction to learn and practice specific skills in a computer application. The project units each offer a five hour experience where students apply previously learned skills by solving a real world, open-ended problem.

The culmination of the course offers the opportunity for **integrated application** use in the solution of rigorous, open-ended problems. Students and teachers work together to frame the specific requirements and goals of the solution.

Additionally, a group of shorter units provide flexibility in course sequence and an opportunity for students to research and report on special topics in IT. The teacher sets the pace and sequence through the units, guides and evaluates student progress, and can easily supplement the curricula with large or small group work, presentations and special lectures.

LABORATORY SYSTEM

The **ITcenter21 (IT21)** curriculum series uses the best of available instructional technology, appropriately applied, to create the **IT21: Computer Applications** course.

High-end, interactive multimedia engages student interest in course content, student roles and problem contexts. Multimedia content is easy to understand and review, and students can quickly return to their place in a unit using the bookmark feature. An on-screen progress monitor, electronic journal and easy to manage portfolio of electronic files combine to help students share in the responsibility for their learning and performance.

Live computer applications run directly within the system with on-screen instructions always visible next to the application window. Conversational style instructions help students prepare for computer use in the real world. However, an “expand icon,” with step-by-step instructions and “View-its,” are available to provide help for the novice student. Therefore, students can use the instructions in a manner that best suits their needs as they gain proficiency in using computer applications.

ITcenter21 also provides the many tools to enable teachers to smoothly manage the complexities of a technology infused curriculum. For example, if students require a template file at the start of an activity, a clean, untouched copy is automatically moved to the students’ work folder. When students finish work for the day, their files are automatically stored in a secure personal folder on the server. In instances where students need to move files as part of their educational process, a “Virtual Explorer” enables students to apply their skills in a live file management system without direct access to their hard drive or server.

The ITcenter21 curriculum series use leading edge technology to enrich the educational experience of all students, while freeing teachers to spend their time focused on their students.

STUDENT ASSESSMENT

The focus of the ten-hour **Application Skills** units is to teach students specific skills in a variety of computer applications. The assessments throughout the lessons serve to reinforce concepts and evaluate student understanding and ability to perform specific tasks in an application. During the **Application Skills** units, selected response questions—multiple choice, true/false, fill-in-the-blank, and fill-in-the-number—are automatically assessed and recorded in a student’s electronic journal to form part of the unit grade. In addition, short answer questions give students the chance to analyze, synthesize, and evaluate concepts. The teacher may also incorporate subjective assessments and student self-evaluations into the unit grade.

The focus of the five-hour **Application Projects** is to enable students to apply skills they have learned in real world, open-ended problems using a single computer application. These units feature well-crafted rubrics to ensure a valid evaluation of student performance. Students view the rubric at the start and completion of each performance task to complete a self-assessment, and the instructor may use the rubric to assign a grade for the performance task.

The focus of the fifteen-hour **Integrated Application Projects** is to provide students with the opportunity to solve real world, open-ended problems using their skills in several computer applications. As with the Application Projects described above, these units use rubrics as their assessment tool.

Before beginning each unit in *ITcenter21*, students use “essential questions” that reveal their pre-existing knowledge about the topic to be studied. Essential questions guide students toward the core ideas in both the unit and the course. At the end of each unit, students revisit the essential questions with an opportunity to provide evidence of their more sophisticated understanding of the topic.

In addition to calculating letter or numeric grades, *ITcenter21* also ensures accountability by providing detailed reports that document how well individual students, or entire classes, achieve national and state standards.

SUGGESTED COURSE OUTLINE – FIRST SEMESTER

Units	Curriculum Hours
Computer Applications Core Units	
Intro to ITcenter21: Computer Applications	2.0
Using Computers	2.0
Ethics	6.0
Computer Basics I	3.0
Web Research	10.0
Word Processing Skills	10.0
Word Processing Project	5.0
Computer Basics II	3.0
Spreadsheet Skills	10.0
Spreadsheet Project	5.0
IT History*	3.0
Presentation Skills	10.0
Presentation Project	5.0
IT In Our Lives*	3.0
Desktop Publishing Skills	10.0
Desktop Publishing Project	5.0
IT Careers*	3.0
Resource Units	
Digital Scanner Resource	0.0
Digital Camera Resource	0.0
Exam Units	
Ethics Exam	0.5
Web Research Exam	0.5
Word Processing Exam	0.5
Spreadsheet Exam	0.5
Presentation Exam	0.5
Desktop Publishing Exam	0.5
Total Curriculum Hours	98.0

* Based on curriculum options, these units may range from one to three curriculum hours.

NOTE: A “curriculum hour” is equal to approximately 45 minutes of instruction.

SUGGESTED COURSE OUTLINE –SECOND SEMESTER

Units	Curriculum Hours
Computer Applications Core Units	
Integration Skills	5.0
Integration Project 1: Spreadsheet, Word Processing and Presentation	15.0
Database Skills	10.0
Database Project	5.0
Applications, Resumes, and Interviews*	3.0
Web Publishing Skills (Requires Microsoft® FrontPage® XP or 2003)	10.0
Web Publishing Project (Requires Microsoft® FrontPage® XP or 2003)	5.0
Troubleshooting and Maintenance I	3.0
Integration Project 2: Spreadsheet, Word Processing and Presentation	15.0
Merge Skills	2.0
Integration Project 3: Spreadsheet, Word Processing and Database	15.0
Troubleshooting and Maintenance II	2.0
Integration Project 4: Open-Ended (<i>teacher sets problem context</i>)	15.0
Resource Units	
Digital Scanner Resource	0.0
Digital Camera Resource	0.0
Exam Units	
Database Exam	0.5
Web Publishing Exam (Requires Microsoft® FrontPage® XP or 2003)	0.5
Total Curriculum Hours	106.00

* Based on curriculum options, these units may range from one to three curriculum hours.

NOTE: A “curriculum hour” is equal to approximately 45 minutes of instruction.

COURSE DESCRIPTIONS – FIRST SEMESTER

INTRO TO IT21 COMPUTER APPLICATIONS

In this brief unit, students will review the easy-to-use and consistent navigation tools for utilizing this on-line course. They will also review the highlight features available to help them be responsible for their own learning and progress.

In this unit, students will learn about computer applications and information technology. They will discover how to use a computer as a learning tool. Students will also learn ways to be responsible for their learning in this course.

In this unit, students will learn that:

- IT, or Information Technology, is the use of technology tools to input, process, store, and communicate information.
- Computer applications are software programs that help people to do specific tasks.
- There are tools in this course that can help students to be responsible for their learning.

USING COMPUTERS

In this unit, students will learn how to use a computer. They will boot, access, and exit operations system software. They will practice using the Start menu and controlling the Windows[®] desktop. Students will create shortcuts on the desktop, use the Recycle Bin, work with file management software, and create, copy, move, and rename folders. Students will also restore programs and data files.

In this unit, students will learn that:

- An operating system manages how a computer's hardware and the central processing unit communicate, manages files, and runs application software. The operating system controls the computer.
- On a computer screen, the desktop is the main work area.
- File management software helps to organize files and folders in a computer.
- As more work is done on a computer, more files will be created. Related files should be organized in a folder.

ETHICS

In this unit, students will learn about ethics and telecommunications. Students will learn how important it is to be honest, respectful, and responsible when using telecommunications. They will discover how e-mail works and practice creating e-mail messages. Then students will explore how computers can be connected. Students will also learn about the Internet.

In this unit, students will learn that:

- Ethics are principles that people use to decide what is right and what is wrong in their everyday actions. With telecommunications, people need to use ethics.
- Telecommunications is the use of technology tools to send and receive information over a distance.
- A network of computers allows people to share information and resources quickly and efficiently.
- Telecommunications includes e-mail and electronic communities, such as newsgroups, mailing lists, and chats.

COMPUTER BASICS I

In this unit, students will learn about the basic computer functions of input, processing, output, and storage. They will also gather information about types of computers, input devices, output devices, and storage devices.

In this unit, students will learn that:

- Input is a basic computer function. Input refers to a computer taking in information. A computer takes in information through input devices.
- Processing is a second basic computer function. Processing refers to a computer using information. The central processing unit, or CPU, is the part of a computer that does most of the job of using information.
- Output is a third basic computer function. Output refers to a computer sending out information. A computer sends out information through output devices.
- Storage is a fourth basic computer function. Storage refers to information being saved by a computer. A computer saves information in random access memory (RAM), long-term memory, or storage devices.

WEB RESEARCH

In this unit, students will learn about Web research and evaluation and will use a Web browser and search tools to access information on the World Wide Web. Students also will evaluate the validity of Web-based information. And students will record Web references and take notes on Web sites.

In this lesson, students will learn that:

- A Web browser is software that enables people to access information on the Web.
- People can search for a Web site or Web page using the site's URL, a directory, or a search engine.
- The eight categories to consider when evaluating the validity of Web-based information are usability, timeliness, relevance, accuracy, appropriateness, authority, comprehensiveness, and bias.
- A reference identifies a source by including the source's author, title, and URL.
- Notes are information recorded from a source.

WORD PROCESSING SKILLS

In this unit, students will learn about using word processing skills to create different types of documents, such as letters, resumes, and research reports. Students will use a mail merge to produce form letters. Then students will create forms that can be printed or even published on the Web. Finally, students will practice using word processing tools to edit a document.

In this unit, students will learn that:

- Word processing software allows people to type text and save it.
- Most word processing software includes tools that allow people to control the appearance of documents.
- Word processing software allows writers to make changes to a document without retyping the entire document.

WORD PROCESSING PROJECT

Taking on the role of an after-school internship at the King Street Movie Theater, students have the opportunity to participate in a small business simulation during this project. They will use problem-solving skills to assist the theater owner in creating a job description document for all of the jobs in the theater.

In the first lesson, Problem, students will explore the project problem and how it relates to their role as interns. Next, the Plan lesson will help students focus on understanding the problem and gathering information to complete the project solution. Students get job description information from other movie theater employees via e-mail, voice mail, and in-person interviews. In the Implement lesson, students apply word processing skills learned in the Word Processing Skills unit to create a solution to the problem. The problem has many acceptable solutions. Students must apply their knowledge and creativity over several class periods to design their solution. Lastly, in the Evaluate lesson, students review and evaluate their project solution and reflect on the problem-solving process that was used to create it.

COMPUTER BASICS II

In this unit, students will learn about computer hardware and software such as internal hardware, external hardware, operating systems, utilities, and application software. Students will also gather information about different CPUs, operating systems, types of utilities, and types of application software.

In this unit, students will learn that:

- Hardware is the physical equipment of a computer.
- External hardware includes input devices, output devices, and storage devices.
- Internal hardware includes the CPU, ROM, RAM, I/O connectors, and drives.
- Software is the instructions that tell a computer what to do.
- System software includes an operating system and utilities. An operating system controls a computer. Utilities maintain a computer.
- Application software includes programs that help people do certain tasks.

SPREADSHEET SKILLS

In this unit, students will learn about spreadsheet software. They will use templates to practice spreadsheet skills. Specifically, students will learn how to enter, organize, format, and calculate data. They will also practice creating templates, what-if analyses and scenarios, graphs, and Web pages.

In this unit, students will learn that:

- A spreadsheet is a grid designed to hold data.
- Spreadsheets have changed how information is managed.
- Spreadsheets can be used as a tool to analyze, manipulate, and graph numerical data.

SPREADSHEET PROJECT

Taking on the role of an after-school internship at the King Street Movie Theater, students have the opportunity to participate in a small business simulation during this project. They will use problem-solving skills to assist the theater owner in a financial analysis of the theater operation.

In the first lesson, Problem, students will explore the project problem and how it relates to their role as an intern. Next, the Plan lesson will help students focus on understanding the problem and gathering information to complete the project solution. Students gather past financial data on the theater and other data from a theater employee via electronic files and in-person interviews. In the Implement lesson, students apply the spreadsheet skills learned in the Spreadsheets Skills unit to create a solution to the problem. This two-part problem has many acceptable solutions. Students must put their knowledge and creativity to work over several class periods to design their solution. Lastly, in the Evaluate lesson, students review and evaluate their project solution and reflect on the problem-solving process that was used to create it.

IT HISTORY

In this unit, students will research an IT history topic using the World Wide Web. Next, they write a report on the topic using word processing software. Then, students present their report to the class.

In this unit, students will learn that:

- Information technology has had an affect on society throughout history.
- Information technology has been growing at an increased steadily throughout history, but especially in recent years.

PRESENTATION SKILLS

In this unit, students will help create presentations. To do this, they will organize slides. They will also add text, including headers and footers. Then, they will modify the design. Following this, they will add pictures, a movie, sound, a diagram, and tables. In addition, students will add special effects, such as animation schemes, slide transitions, WordArt, hyperlinks, and custom animation. They also will create a presentation from an outline. And they will learn how to work with others. Finally, students will set up shows, print, and publish a presentation on the Web. After they have learned all of these skills, they will plan a presentation.

In this unit, students will learn that:

- A presentation is a set of slides that may combine text, still images (including illustrations, photographs, diagrams, tables, and charts), movies (including animation and video), sound, special effects, and design.
- Presentations help people share information with other people. They also keep other people interested in information.
- Effective presentations have the following traits: They have a distinct purpose. They are directed toward a specific audience. They are clear. They are interesting.

PRESENTATION PROJECT

Taking on the role of an after-school internship at the King Street Movie Theater, students have the opportunity to participate in a small business simulation during this project. They will use problem-solving skills to assist the theater owner in creating a presentation that will run in the theater before the main feature.

In the first lesson, Problem, students will explore the project problem and how it relates to their role as an intern. Next, the Plan lesson will help students focus on understanding the problem and gathering information to complete the project solution. Students gather information such as safety rules and concession advertisements from movie theater employees. In the Implement lesson, students apply the presentation skills learned in the Presentation Skills unit to create a solution to the problem. The problem has many acceptable solutions. Students must apply their knowledge and creativity over several class periods to design their solution. Lastly, in the Evaluate lesson, students review and evaluate their project solution and reflect on the problem-solving process that was used to create it.

IT IN OUR LIVES

In this unit, students will research an IT topic using the World Wide Web. Next, they create a report on the topic using presentation software and present it to the class.

In this unit, students will learn that:

- Information technology impacts society.
- The effects of IT can be both positive and negative.
- IT will continue to influence society in the future.

DESKTOP PUBLISHING SKILLS

In this unit, students will learn how to create publications. They will use desktop publishing software to learn about design and layout techniques, master files, printing, and publishing. And students will create documents that include text files, graphic files, WordArt, spot colors, and color schemes. They will also learn how to prepare documents for a commercial printer.

In this unit, students will learn that:

- Desktop publishing gives users flexibility and control over page design with text, graphics, and color.
- Desktop publishing can help people communicate effectively.
- Publications should be planned based on audience, tone, and objective.
- Good designs follow general layout guidelines.

DESKTOP PUBLISHING PROJECT

Taking on the role of an after-school internship at the King Street Movie Theater, students have the opportunity to participate in a small business simulation during this project. They will use problem-solving skills to assist the theater owner in creating a newsletter to send to theater customers.

In the first lesson, Problem, students will explore the project problem and how it relates to their role as an intern. Next, the Plan lesson will help students focus on understanding the problem and gathering information to complete the project solution. Students gather information about what should appear in the newsletter and even receive draft articles from other theater employees. In the Implement lesson, students apply the publishing skills learned in the Desktop Publishing Skills unit to design and create a newsletter for the business. The problem has many acceptable solutions. Students must put their knowledge and creativity to work over several class periods to design their solution. Lastly, in the Evaluate lesson, students review and evaluate their project solution and reflect on the problem-solving process that was used to create it.

IT CAREERS

In this unit, students will research an IT careers topic using the World Wide Web. Next, they create an advertisement for the career using word processing software. Then, students present their advertisement to the class.

In this unit, students will learn that:

- Information technology impacts the workplace.
- Information technology has changed the nature of existing careers, and it has created new careers.

DIGITAL SCANNER RESOURCE

In this unit, students will scan an item using the digital scanner. Students will then transfer the file of the scanned item to the school network.

In this unit, students will learn that:

- A scanner is an input device that is used to change images into information that a computer can read.
- A network of computers allows people to share information and resources quickly and efficiently.

DIGITAL CAMERA RESOURCE

In this unit, students will learn how to correctly use a digital camera. They will take a digital photo of a partner and have a photo taken of themselves. Students will then transfer the photos to the school network.

In this unit, students will learn that:

- A digital camera is an input device that is used to take photographic images. A digital camera stores the images in way that a computer can read them.
- A network of computers allows people to share information and resources quickly and efficiently.

ETHICS EXAM

In this unit, students can demonstrate that they understand key ethics concepts and their use. Students will answer a series of selected-response questions, which are then assessed by the computer.

WEB RESEARCH EXAM

In this unit, students can demonstrate that they understand key Web research concepts and their use. Students will answer a series of selected-response questions, which are then assessed by the computer.

WORD PROCESSING EXAM

In this unit, students can demonstrate that they understand key word processing concepts and their use. Students will answer a series of selected-response questions, which are then assessed by the computer.

SPREADSHEET EXAM

In this unit, students can demonstrate that they understand key spreadsheet concepts and their use. Students will answer a series of selected-response questions, which are then assessed by the computer.

PRESENTATION EXAM

In this unit, students can demonstrate that they understand key presentation concepts and their use. Students will answer a series of selected-response questions, which are then assessed by the computer.

DESKTOP PUBLISHING EXAM

In this unit, students can demonstrate that they understand key desktop publishing concepts and their use. Students will answer a series of selected-response questions, which are then assessed by the computer.

COURSE DESCRIPTIONS – SECOND SEMESTER

INTEGRATION SKILLS

In this unit, students will learn about integrating information from different applications. Students will share data and graphs between the Microsoft® Office Applications by cutting and pasting, linking, and embedding. They will also break links that have been established.

In this unit, students will learn that:

- Information can be shared among applications.
- Copying and pasting, linking, and embedding are ways to integrate information.
- Links between integrated information can be broken.

INTEGRATION PROJECT 1: SPREADSHEET, WORD PROCESSING, AND PRESENTATION

Taking on the role as a concerned and active citizen, students will participate in a non-profit group. They will select a topic of concern for the community, develop and conduct a survey, and analyze and report on their findings.

In the first part of the project, students will explore the project problem and their responsibilities. Next, students will learn about planning and conducting a valid survey using guided research on-line. They will use word processing software to create a survey questionnaire. After gathering real data, students will use a spreadsheet to analyze and graph their findings. They will also use their newly acquired integration skills to incorporate the spreadsheet data and graphs into a report and presentation for the group.

In the second part of the project, students will communicate their solution by publishing their survey results to the community using Web publishing or desktop publishing software. They may also present their findings to classmates. Finally, students will review and evaluate their project solution using a rubric. And they will reflect on the problem-solving process that they used to create their solution.

This real-world project has many acceptable solutions, so students will apply their knowledge and creativity over several class periods to design their own unique solution.

DATABASE SKILLS

In this unit, students will use an existing database to plan and create a new one in order to learn and practice database functions. Specifically, they will learn how to move among fields and records, and to sort and filter data. They will learn how to create tables, forms, and data access pages; design and run queries; and design and print reports. In addition, students will learn how to import and export data to and from other sources. Most importantly, students will learn to use a database as a tool for organizing data to create useful information.

In addition, students will learn that:

- A database is a collection of related data that is stored in a computer.
- Databases provide a flexible system for organizing and analyzing large amounts of data.
- Data that is stored, organized, and easy to retrieve becomes useful information.
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DATABASE PROJECT

Taking on the role of an after-school internship at the King Street Movie Theater, students have the opportunity to participate in a small business simulation during this project. They will use problem-solving skills to assist the theater owner in creating a customer database.

In the first lesson, Problem, students will explore the project problem and how it relates to their role as an intern. Next, the Plan lesson will help students focus on understanding the problem and gathering information to complete the project solution. Students get information about how the customer database will be used by movie theater employees through in-person interviews. In the Implement lesson, students apply the database skills learned in the Database Skills unit to design and create a database for the business. The problem has many acceptable solutions. Students must apply their knowledge and creativity over several class periods to design their solution. Lastly, in the Evaluate lesson, students review and evaluate their project solution and reflect on the problem-solving process that was used to create it.

APPLICATIONS, RÉSUMÉS, AND INTERVIEWS

In this unit, students will fill out an application for employment. They will also create a resume. Next, students will research how to be prepared for an interview, and they will analyze excerpts from an interview. Then, they will write a follow-up letter.

- A completed application for employment provides an employer with information about an applicant.
- A resume is a document that an applicant creates that highlights his or her qualifications for employment. When applying for a job, if an applicant gives an employer a resume, he or she should include a cover letter with it.
- An interview is a meeting between an employer and an applicant to discuss the applicant's qualifications for the job. Applicants should prepare for an interview by knowing about these topics: proper dress, when to arrive, appropriate manners and body language, the company and the job, potential questions and answers to them, and questions to ask the interviewer.
- A follow-up letter shows the applicant's courtesy and emphasizes his or her qualifications.

WEB PUBLISHING SKILLS (REQUIRES MICROSOFT® FRONTPAGE® XP OR 2003)

In this unit, students will learn about Web publishing. They will learn how to use HTML and Web authoring software to insert and format text, graphics, hyperlinks, and tables. Students will also plan, create, proof, test, and publish Web sites.

In this unit, students will learn that:

- Web publishing shares information by placing documents and related files on the Internet or the World Wide Web.
- HTML is the programming language for creating Web pages. People can use Web authoring software to create a Web site without knowing the HTML code.
- HTML commands, or "tags," are combined with the content of a Web page to tell Web browsers how it should look.
- A good Web site should capture the audience's attention. And it should keep the audience focused on the site. The best Web site content is made up of sound information, appealing graphics, entertaining stories, and good links to other Web sites.
- Connecting a Web site to other related information adds to the value of the Web site. A hyperlink is a connection between text or graphics with some other element on a Web page.

WEB PUBLISHING PROJECT (REQUIRES MICROSOFT® FRONTPAGE® XP OR 2003)

Taking on the role of an after-school internship at the King Street Movie Theater, students have the opportunity to participate in a small business simulation during this project. They will use problem-solving skills to assist the theater owner in creating a Web site to promote the theater and its events.

In the first lesson, Problem, students will explore the project problem and how it relates to their role as an intern. Next, the Plan lesson will help students focus on understanding the problem and gathering information to complete the project solution. Students learn what information their boss wants to include on the site and receive electronic images of the theater to use as well. In the Implement lesson, students apply the Web publishing skills learned in the Web Publishing Skills unit to create a solution to the problem. The problem has many acceptable solutions. Students must put their knowledge and creativity to work over several class periods to design their solution. Lastly, in the Evaluate lesson, students review and evaluate their project solution and reflect on the problem-solving process that was used to create it.

TROUBLESHOOTING AND MAINTENANCE I

In this unit, students will discover how maintaining a computer can prevent problems. Students will find out what kinds of preventative maintenance can be done annually, monthly, and daily. Then they will learn how to change computer system settings and how to determine available memory and disk space. Finally, students will gather information about different types of viruses, computer misuse, and ways to protect computers.

In this unit, students will learn that:

- Preventative maintenance is taking care of a computer to keep it working at its best.
- Preventative maintenance should be done on a regular schedule that is based on each person's computer use.
- Computer performance is affected by different components of the computer.

INTEGRATION PROJECT 2: SPREADSHEET, WORD PROCESSING & PRESENTATION

Taking on the role as a member of an entrepreneur club, students will select and develop a business concept to present at the club's next meeting.

In the first part of the project, students will explore the project problem and how it relates to their role as an entrepreneur. Next, they will focus on developing their business concept using guided on-line research and class discussions. Using a spreadsheet, students will organize and graph financial data that supports their ideas. They will also use their newly acquired integration skills to include their spreadsheet information in a business plan that they will create using word processing software. Students will also integrate portions of the business plan and the financial information into a presentation.

In the second part of the project, students will advertise their new business to their target customers using Web publishing or desktop publishing software. They may also present their findings to classmates. Finally, students will review and evaluate their project solution using a rubric. And they will reflect on the problem-solving process that they used to create their solution.

This real-world project has many acceptable solutions, so students will apply their knowledge and creativity over several class periods to design their own unique solution.

MERGE SKILLS

In this unit, students will learn about sharing information between Word Processing and Database applications. They will create personalized form letters and labels using the mail merge feature.

In this unit, students will learn that:

- In a mail merge, the database document is the source document, and a word processing document is the destination document.
- Placeholders, called merge fields, tell the software to insert certain data from the database.
- Mail merges can be used to create form letters, labels, and envelopes.

INTEGRATION PROJECT 3: SPREADSHEET, WORD PROCESSING & DATABASE

Taking on the role as an event planner for a non-profit organization, students will plan and promote a fund-raising dinner. Students will select the menu, entertainment, and location for the event, and then they will prepare personalized invitations.

In the first part of the project, students will explore the project problem and how it relates to their role as an event planner. Next, they will focus on planning the event using guided on-line research and track the cost of the event in a spreadsheet. Students will then develop an event proposal for the organization, integrating information from the spreadsheet. They will also compile a list of possible attendees for the event in a database and use the database to create personalized invitations and mailing labels.

In the second part of the project, students will promote the event to the community using Web publishing or desktop publishing software. They may also present their findings to classmates. Finally, students will review and evaluate their project solution using a rubric. And they will reflect on the problem-solving process that they used to create their solution.

This real-world project has many acceptable solutions, so students will apply their knowledge and creativity over several class periods to design their own unique solution.

TROUBLESHOOTING AND MAINTENANCE II

In this unit, students will learn about troubleshooting computer problems. They will identify potential solutions, select multiple solutions, and evaluate the outcome of the solutions. They will troubleshoot problems with printers, speakers, monitors, and digital cameras. Students will learn how to use the Windows[®] Help and Support Center to troubleshoot problems. Then they will learn how to obtain assistance by using hardware documentation.

In this unit, students will learn that:

- Troubleshooting is when people attempt to find the source of a problem and then correct it.
- The troubleshooting method is a logical way to troubleshoot computer problems. With this method, people define the problem, investigate and analyze the problem, identify possible solutions, select and implement a solution, and then evaluate the solution.
- Troubleshooting is a repeating process.

INTEGRATION PROJECT 4: OPEN-ENDED (teacher sets problem content)

As a culmination to the course, this integration project enables students to work together with their teacher to frame a problem to be solved using any of the applications studied during the course.

In the first part of the project, students will explore the project problem and how it relates to their role. Next, students will focus on planning the project. Then they will use their integrated application skills to create a solution to the problem.

In the second part of the project, students will present a solution to the problem using Web publishing or desktop publishing software. They may also present their findings to classmates. Finally, students will review and evaluate the project solution using a rubric. And students will reflect on the problem-solving process that they used to create their solution.

This open-ended, real-world project has many acceptable solutions, so students will apply their knowledge and creativity over several class periods to design their own unique solution. There is no limit to the number and variety of problems that the teacher and class can tackle.

DATABASE EXAM

In this unit, students can demonstrate that they understand key database concepts and their use. Students will answer a series of selected-response questions, which are then assessed by the computer.

WEB PUBLISHING EXAM (REQUIRES MICROSOFT® FRONTPAGE® XP OR 2003)

In this unit, students can demonstrate that they understand key Web publishing concepts and their use. Students will answer a series of selected-response questions, which are then assessed by the computer.